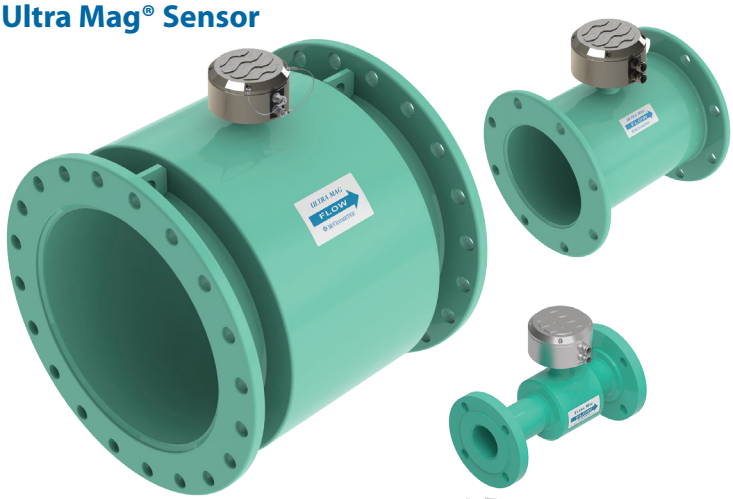
Ultra Mag® Sensor



ProComm Converter





ProComm GO Converter

Ultra Mag flow meters are manufactured to the highest standard available for mag meters. The flanged end tube design permits use in a wide range of applications with up to 300 PSI working pressure. The fabricated tube is stainless steel with steel or stainless steel flanges and is lined with UltraLiner™, an NSF approved, fusion bonded epoxy material.

Standard and Hazardous Location Models

Dura Mag is designed to work in ordinary circumstances and in hazardous locations. Dura Mag is available as either the standard model or as a hazard location (HL) model, which is certified by MET.

Certifications

Dura Mag currently has three certifications for quality and safety:

- ISO 9001:2015 certified quality management system
- Certified by MET to UL 61010-1 / CSA C22.2 No. 61010-1
- Certified to NSF / ANSI Standards

Dura Mag is certified by IAPMO R&T to NSF/ANSI 61 for material safety and NSF/ANSI 372 for low lead content. MET certification for HL models is described in greater detail in the meter specifications on page 8.

AVAILABLE ULTRA MAG END CONNECTIONS

Nominal Line Size	AWWA CL D	AWWA CL F	ANSI 150#	ANSI 300#	Wafer
1.5 in			x		
2 in			x	x	x
2.5in			x		
3 in			x	x	x
4 in	x		x	x	
6 in	x		x	x	
8 in	x		x	x	
10 in	x		x	x	
12 in	x		x	x	
14 in	x	x	x	x	
16 in	x	x	x	x	
18 in	x	x	x	x	
20 in	x	x	x	x	
24 in	x	x	x	x	
30 in	x	x	x	x	
36 in	x	x	x	x	
42 in	x		x		
48 in	x		x		

TYPICAL APPLICATIONS

Industrial

Raw Water
Chilled Water
Cooling Water
Process Control
Effluent Wastewater

Clean Water

Well Water
Potable Water
Pump Stations
Rate-of-Flow Control
Raw Water Transmission

Wastewater

Influent
Effluent
Reclaimed
Lift Stations
Waste Activated Sludge
Return Activated Sludge

PERFORMANCE ADVANTAGES

- Flanged models need only one pipe diameter upstream of most flow disturbers
- No obstruction to the flow
- No moving parts to wear or break
- Choice of Accuracy +/- 0.2% OR +/- 0.5%
- Debris or solids will not clog the meter
- Maintenance free
- No head loss
- Bi-directional flow
- Empty pipe detection
- Unaffected by changes in density and viscosity
- No risk of liner delamination or separation
- Wide flow range
- Separated power and signal cables

Installation

The meter needs to be located a minimum distance before and after flow disturbances, such as elbows, pumps, partially opened valves, and changes in pipe diameter. The uneven flow created by these obstructions can vary with each system.

The minimum distance is measured in pipe diameters (D). To ensure accuracy locate the sensor upstream and downstream of flow disturbances as follows:

Size	Upstream/ downstream
Flanged 1½" to 3"	0 / 0
Wafer 2" & 3"	3 / 1
Flanged 4" to 24"	2 / 1

Ultra Mag flow meter installation is similar to placing a short length of flanged end pipe in the line. The meter can be installed vertically, horizontally, or inclined on suction or discharge lines. The meter must have a full pipe of liquid for proper operation. Fluid must be grounded to the downstream flange of the sensor either via internal grounding electrodes (2 - 12") or using McCrometer 316 SS grounding rings. For best performance, grounding rings are recommended for all sizes.

All blending and chemical injection should be done early enough so the flow media is thoroughly mixed prior to entering the measurement area.

ProComm Converter

The signal converter is the reporting, input and output control device for the sensor. The converter allows the measurements, functional programming, control of the sensor and data recording to be communicated through the display and inputs/ outputs.

The microprocessor-based signal converter has a curve-fitting algorithm to improve accuracy, dual 4-20mA analog outputs, an optional RS485 communication port, an 8 line graphical backlit LCD display with 6-key touch programming, and a rugged enclosure that meets IP67.

In addition to a menu-driven self-diagnostic test mode, the converter continually monitors the microprocessor's functionality. The converter will output rate of flow and total volume. The converter also comes standard with password protection and many more features.

Isolated Power and Signal

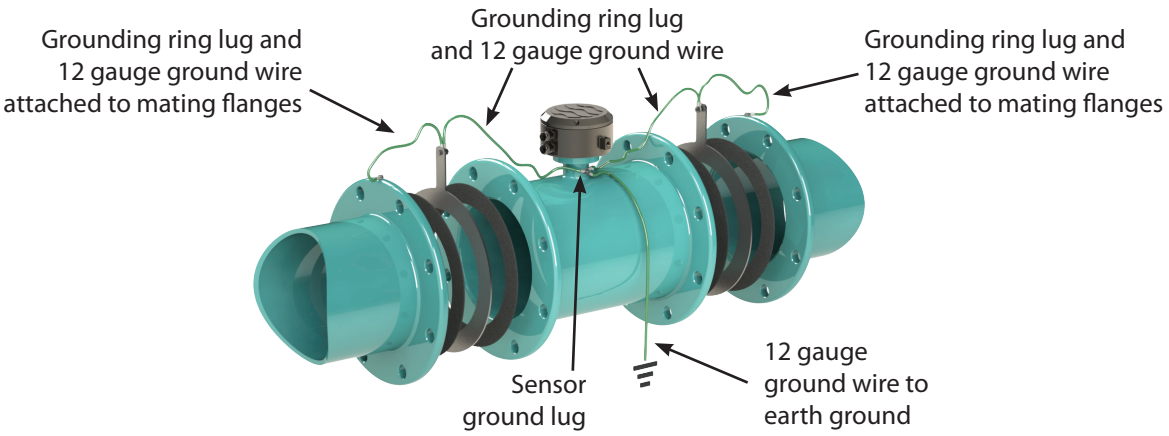
The power and signal between the converter and sensor are isolated and placed in separate cables giving superior resistance to electrical signal noise compared to single cable designs. An added benefit from the dual cable design is a maximum cable length of up to 500ft.

Ultra Mag Sensor Grounding

Information For Grounding Ring Installations

- Gaskets must be used on either side of the grounding ring to provide a proper seal on the flanges.
- Rings & gaskets must align concentrically with the pipe so they do not obstruct or affect flow through the tube.
- The two grounding rings and four gaskets require an additional installation width of 0.5".

The grounding rings and gaskets must be used to ensure a positive seal at the flanges, and to ensure fluid is properly grounded to sensor. Attach the provided 12 gauge wire to the ground lug and an isolated grounding rod.



Ultra Mag with ProComm GO Converter Part Number Matrix

UM	__	-	__	__	__	__	__	__	__	__	-	____	-	__	-	__	-	____
Line Size																		
1.5 in	0C																	
2 in	02																	
2.5 in	0D																	
3 in	03																	
4 in	04																	
6 in	06																	
8 in	08																	
10 in	10																	
12 in	12																	
14 in	14																	
16 in	16																	
18 in	18																	
20 in	20																	
24 in	24																	
30 in	30																	
36 in	36																	
42 in	42																	
48 in	48																	
Flange Connections																		
AWWA Class D (150 psi Rating) *(Standard)*		1																
ANSI Class 150# (285 psi Rating)		2																
ANSI Class 300# (300 psi Rating)		3																
AWWA Class F (300 psi Rating)		4																
Wafer Style (2 & 3" Only)		N																
Electrode Material Options																		
S316 Stainless Steel *(Standard)*			S															
Hastelloy			H															
Converter Mounting and Cable Connector Options																		
Meter Mount Converter *(Standard)*				M														
Strain Relief [25 ft Remote Mount]				R														
Quick Connect [25 ft Remote Mount]				Q														
Strain Relief [25 ft Remote Mount] (Potted)				P														
Quick Connect [25 ft Remote Mount] (Potted)				C														
Converter Power Options																		
Battery Power *(Standard)*					B													
Solar Power, Battery Backup					S													
A/C Power, Battery Backup					E													
DC Power, Battery Backup					F													

continued on next page

Ultra Mag with ProComm GO Converter Part Number Matrix (cont.)

UM	_	-	_	_	_	_	_	_	_	_	-	__	-	_	-	_	-	__
Converter Output Options							-											
No Outputs *(Standard)*							-											
No Outputs, DC Cable Only							0											
Two Digital Out							1											
4-20mA Analog only							2											
4-20mA Analog + Two Dig Out							3											
AMI Smart Output only							4											
AMI Smart Output + Two Dig Out							5											
AMI Smart Output + 4-20mA Analog							6											
AMI Smart Output + 4-20mA Analog + Two Dig Out							7											
DC Power/ Analog Out Cable Options								-										
No DC Power or Outputs *(Standard)*								-										
No Cable - Output Configured (Quick Conn)								0										
6 ft (Open Leads)								1										
25 ft (Open Leads)								2										
50 ft (Open Leads)								3										
Pulse Cable Length Options									-									
No Outputs *(Standard)*									-									
No Cable - Output Configured (Quick Conn)									0									
6 ft (Open Leads)									1									
25 ft (Open Leads)									2									
50 ft (Open Leads)									3									
25 ft (7-Pin Male connector for Telemetry)									4									
50 ft (7-Pin Male connector for Telemetry)									5									
Output Cable Terminal Options										-								
Strain Relief										1								
Quick Connect Cable Terminals										2								
Smart Output Protocol Options (*4 or 5 output option required)												-						
No AMI Outputs												-						
Sensus Protocol (6ft cable, Nicor Connector hardwired only)												SEN						
Itron 6 digit Protocol (6ft cable, Nicor Connector hardwired only)												IT6						
Itron 9 digit [100W] Protocol (6ft cable, Nicor Connector hardwired only)												IT9						
Neptune Protocol (6ft cable, Nicor Connector hardwired only)												NEP						
ATT Wireless Telemetry System (RTU, Solar Panel, 15 ft 7 pin Cable)												ATT						
Verizon Wireless Telemetry System (RTU, Solar Panel, 15 ft 7 pin Cable)												VZW						
Non Standard Length Options													-					
McCrometer Length *(Standard)*													-					
Competitor Replacement Length													LS					
Competitor Replacement Length													LP					
Custom Specified Length (Nominal Length)													L(XX)					
Color Options														-				
McCrometer Green (Standard)														-				
Sky Blue														SB				
Dark Blue														DB				
Lavender														LV				
White														WH				
Hazardous Area Location																		
Class 1, Division 2, Groups A-D, T5																		HL

Ultra Mag with ProComm Converter Part Number Matrix

UM	___	-	_	_	_	___	_	_	-	___	-	___	-	___	-	_	-	___
Nominal Line Size																		
1.5 in	0C																	
2 in	02																	
2.5in	0D																	
3 in	03																	
4 in	04																	
6 in	06																	
8 in	08																	
10 in	10																	
12 in	12																	
14 in	14																	
16 in	16																	
18 in	18																	
20 in	20																	
24 in	24																	
30 in	30																	
36 in	36																	
42 in	42																	
48 in	48																	
Flange Connections																		
AWWA Class D (150 psi Rating) (Standard)			1															
ANSI Class 150# (285 psi Rating)			2															
ANSI Class 300# (300 psi Rating)			3															
AWWA Class F (300 psi Rating)			4															
Wafer Style (2 & 3" Only)			N															
Electrode Material Options																		
S316 Stainless Steel *(Standard)*				S														
Hastelloy				H														

continued on next page

Ultra Mag with ProComm Converter Part Number Matrix (cont.)

UM	___	-	__	__	__	___	__	__	-	___	-	___	-	___	-	__	-	___
Converter Mounting and Cable Connector Options																		
Meter Mount Converter					M													
Strain Relief [Remote Mount]					R													
Quick Connect [Remote Mount]					Q													
Strain Relief [Remote Mount] (Potted)					P													
Quick Connect [Remote Mount] (Potted)					C													
Remote Cable Options																		
Meter Mount Converter [No remote Cable]						000												
25 feet (Standard)						025												
50 feet						050												
75 feet						075												
100 feet						100												
125 feet						125												
150 feet						150												
175 feet						175												
200 feet						200												
500 feet						500												
Converter Power Options																		
A/C Power							A											
DC Power							D											
Converter Output Options																		
Dual 4-20mA Analog, Dual Digital *(Standard)*								1										
Modbus + STD (Two 4-20, two Dig)								2										
Hart + STD (Two 4-20, two Dig)								3										
Datalogger/BIV + STD (Two 4-20, two Dig)								4										
Datalogger/BIV + Modbus + STD (Two 4-20, two Dig)								5										
Datalogger/BIV + Hart + STD (Two 4-20, two Dig)								6										
AMI Smart Output + STD (Two 4-20, two Dig)								7										
Datalogger/BIV + AMI Smart Output + STD (Two 4-20, two Dig)								8										
Smart Output Protocol Options (*7 or 8 output option required)																		
No AMI Outputs									-									
Sensus Protocol (6ft cable, Nicor Connector hardwired only)									SEN									
Itron 6 digit Protocol (6ft cable, Nicor Connector hardwired only)									IT6									
Itron 9 digit [100W] Protocol (6ft cable, Nicor Connector hardwired only)									IT9									
Neptune Protocol (6ft cable, Nicor Connector hardwired only)									NEP									
ATT Wireless Telemetry System (RTU, Solar Panel, 15 ft 7 pin Cable)									ATT									
Verizon Wireless Telemetry System (RTU, Solar Panel, 15 ft 7 pin Cable)									VZW									
Non Standard Length Options																		
McCrometer Length *(Standard)*																		
Competitor Replacement Length											LS							
Competitor Replacement Length											LP							
Custom Specified Length (Nominal Length)											L(XX)							
Accuracy Options																		
Standard Accuracy 0.5% Calibration													-					
High Accuracy 0.2% calibration													HA					
Color Options																		
McCrometer Green (Standard)														-				
Sky Blue														SB				
Dark Blue														DB				
Lavender														LV				
White														WH				
Hazardous Area Location																		
Class 1, Division 2, Groups A-D, T5																		HL

ULTRA MAG FLOW METER SPECIFICATIONS

Physical Specifications

Directionality	Forward and reverse flow indication and forward, reverse, net totalization are standard with all meters
Pipe Sizes	1.5" 2", 2.5" 3", 4", 6", 8", 10", 12", 14", 16", 18", 20", 24", 30", 36", 42", 48"
Body Style	Unflanged and flanged tube.
Electrical Connections	• Compression gland seals • Quick-Connect
Electrodes	Type 316 stainless steel, others optional
Liner	UltraLiner NSF approved, fusion bonded epoxy
Sensor Cable Lengths	**Standard:** 25'/7.6 m McCrometer supplied submersible cable with each remote mount unit. **Optional:** Up to 500'/152.4 m, or 25'/7.6 m max for battery powered. **Quick connect:** Available in standard cable lengths: Feet: 25, 50, 75, 100, 125, 150, 175, 200, 500 Meters: 7.6, 15.25. 22.5, 30.5, 38.1, 45.75, 53.3, 61, 152.4 Custom cable lengths at additional cost.
Head Loss	None. No obstruction in line and no moving parts

Performance and Operational Specifications

Operating Temperature	-10 to 60°C (14 to 140°F)
Storage Temperature	-15 to 60°C (5 to 140° F)
Pressure Range	AWWA Class D (150 psi Rating) (Standard) AWWA Class F (300 psi Rating) ANSI Class 150# (285 psi Rating) ANSI Class 300# (300 psi Rating)
Accuracy	• Standard: +/- 0.5% of measured value ±0.006 ft/s (±0.0018 m/s) • Optional: +/- 0.2% of measured value ±0.006 ft/s (±0.0018 m/s) • Battery powered: 1% of measured value ±0.006 ft/s (±0.0018 m/s) **IMPORTANT NOTICE ON FLOW METER ACCURACY:** The flow meter, the cable and the electronics are factory calibrated for accuracy as a single unit. Changing the cable length with the Splice Kit changes the accuracy of the meter and invalidates the calibration certificate.
Accuracy Tests	Multiple point wet flow calibration of every complete flow tube with its signal converter. If desired, the tests can be witnessed by the customer. The McCrometer test facilities are traceable to the National Institute of Standards & Technology. Uncertainty relative to flow is ±0.15%.
Pipe Run Requirements	**1½" to 3" Flanged style meters:** 0D upstream / 0D downstream **2" and 3" Wafer style meters:** 3D upstream / 1D downstream **4" to 48" Steel flanged meters:** 1D upstream / 0D downstream
Reliability	±0.05% or ±.0008ft/s (±0.25mm/s), whichever is greater
Conductivity	5 µs/cm
Velocity Range	.2 to 32 FPS
IP Rating	**Standard Model:** Quick Connect (NEMA 6P/IP68 with remote converter) Compression gland seals (NEMA 6P/IP68 with remote converter) **HL Model:** Quick Connect (IP67) Compression gland seals (IP67)
Sensor Submersibility Depth	**With standard strain relief cable:** 9 m (30 ft.) **With optional quick connect cable:** 1.8 m (6 ft.)

ULTRA MAG FLOW METER SPECIFICATIONS (CONT.)

Certifications and Approvals

Standard Model	• ISO 9001:2015 certified quality management system • Certified by MET to UL 61010-1 • Certified to NSF / ANSI Standards*	

HL Model	• ISO 9001:2015 certified quality management system
	• Certified by MET to UL 61010-1 and MET C22.2 No. 61010-1-04
	  • Class I, Division 2, Groups A-D, T5
	  • Class I, Zone 2, IIC T5
	• Certified to NSF / ANSI Standards*	

* Ultra Mag is certified by IAPMO R&T to NSF/ANSI 61 for material safety and NSF/ANSI 372 for low lead content.		

Other Specifications

Options and Accessories	• Hastelloy® electrodes • Additional sensor cable up to 475' • Annual verification / calibration • Stainless steel ID tag • Battery or battery-solar powered converter • DC powered converter (10-35 VDC, 21 W) • Meter mounted converter • Extended warranty • ANSI or DIN flanges • Special lay lengths, including ISO standard lay lengths • Quick Connect cable fittings • HART® Converter • Smart Output™ (Sensus or Itron compatible)
Warranty	**Meter:** 2 year warranty **Liner:** Lifetime guarantee

DIMENSIONS AND WEIGHTS

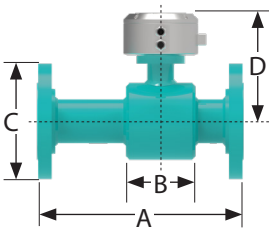
Wafer Mag Models

Pipe Size (Nominal)	Flow Ranges (0.2 to 32 FPS) Min-Max GPM	DIMENSIONS (Lay Lengths)		Est. Shipping Weight (lbs.)*
		A	B	
2"	1.29-200	4.5	6.5	9.6
3"	3.25-510	4.5	7.0	11.3

* For remote mount meters, add 4 lbs for ProComm converter.

1½" to 3" Models

Pipe Size (Nominal)	Flow Ranges (0.2 to 32 FPS) Min-Max GPM	DIMENSIONS (Lay Lengths)							Est. Shipping Weight (lbs.)*	
		A		B	C		D			
		CL150 ANSI 150#	CL300 ANSI 300#		CL150 ANSI 150#	CL300 ANSI 300#	CL150 ANSI 150#	CL300 ANSI 300#	CL150 ANSI 150#	CL300 ANSI 300#
1 ½"	1.29-200	11	not offered	4.5	5.0	not offered	6.5	not offered	45	not offered
2"	1.29-200	11	14	4.5	6.0	6.5	6.5	7.25	45	70
2 ½"	3.25-510	13.4	not offered	4.5	7.0	not offered	7.0	not offered	50	not offered
3"	3.25-510	13.4	15.5	4.5	7.5	8.25	7.0	7.75	55	80

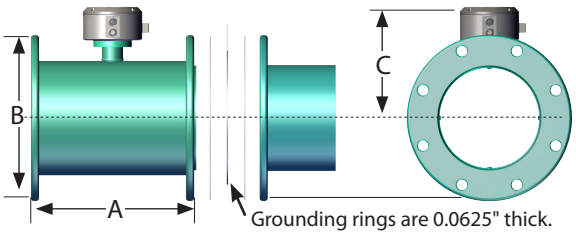


* For remote mount meters, add 4 lbs for ProComm converter.

4" to 12" Models Body Style

Pipe Size (Nominal)	Flow Ranges (0.2 to 32 FPS) Min-Max GPM	DIMENSIONS (Lay Lengths)									Est. Shipping Weight (lbs.)*		
		A			B			C					
		AWWA	ANSI		AWWA	ANSI		AWWA	ANSI		AWWA	ANSI	
		150# Class D	150# CL150	300# CL300	150# Class D	150# CL150	300# CL300	150# Class D	150# CL150	300# CL300	150# Class D	150# CL150	300# CL300
4"	6.97-1110	13.4	13.4	13.4	9.0	9.0	10.0	9.25	9.25	9.25	70	108	108
6"	16.1-2560	14.6	14.6	14.6	11.0	11.0	12.5	10.25	10.25	10.25	80	138	138
8"	29.2-4670	16.1	17.25	17.25	13.5	13.5	15.0	11.25	11.25	11.25	115	195	195
10"	46.3-7400	18.5	18.5	18.5	16.0	16.0	17.5	12.5	12.5	12.5	140	247	247
12"	67.3-10760	19.7	19.7	19.7	19.0	19.0	20.5	13.5	13.5	13.5	190	342	342

*Shipping weights are estimated and may change due to specific order packaging

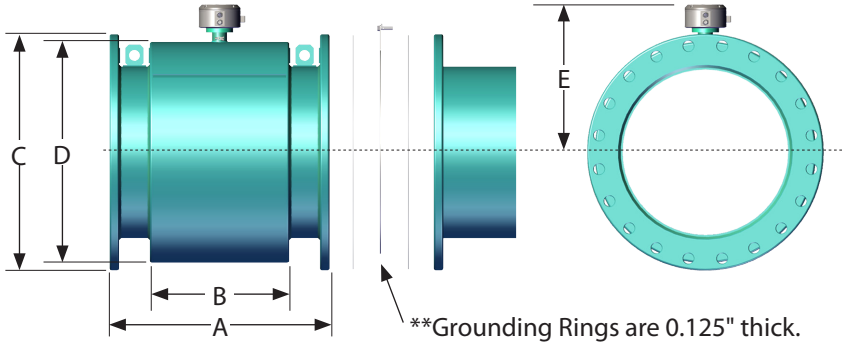


DIMENSIONS AND WEIGHTS (CONT.)

14+" Models Body Style

Pipe Size (nom.)	Flow Ranges (0.2 to 32 FPS) Min-Max GPM	DIMENSIONS											Est. Shipping Weight (lbs.)*			
		A				B	C				D	E				
		AWWA		ANSI			AWWA		ANSI				AWWA		ANSI	
		150# Class D	300# Class F	150# CL150	300# CL300		150# Class D	300# Class F	150# CL150	300# CL300			150# Class D	300# Class F	150# CL150	300# CL300
14"	90.1-14410	21.70	22.75	22.75	22.75	11.875	21.00	23.00	21.00	23.00	20.135	14.56	Contact factory			
16"	117-18670	23.60	25.25	25.25	25.25	14.25	23.50	25.50	23.50	25.50	21.635	15.32				
18"	149-23820	23.60	25.25	25.25	25.25	14.25	25.00	28.00	25.00	28.00	23.635	16.32				
20"	186-29600	25.60	28.25	28.25	28.25	16.06	27.50	30.50	27.50	30.50	25.6975	17.35				
24"	269-43040	30.70	35.75	35.75	35.75	21.75	32.00	36.00	32.00	36.00	29.51	19.25				
30"	418-66740	35.80	41.75	41.75	41.75	25.25	38.75	43.00	38.75	43.00	35.6975	22.35				
36"	607-97000	46.10	46.10	46.10	46.10	28.63	46.00	50.00	46.00	50.00	42.76	25.88				
42"	831-132900	48.05	not offered	48.05	not offered	36.25	52.75	not offered	52.75	not offered	48.135	28.57		not offered		
48"	1091-174440	50.00		50.00		36.25	59.50		59.50		54.135	31.57				

*Shipping weights are estimated and may change due to specific order packaging



PROCOMM GO CONVERTER PART NUMBER MATRIX

PG -	—	—	—	—	—	—	-	——	-	——
Converter Mounting Options										
Meter Mount Converter *(Standard)*	M									
Remote Mount	R									
Converter Power Options										
Battery Power *(Standard)*		B								
Solar Power, Battery Backup		S								
A/C Power, Battery Backup		E								
DC Power, Battery Backup		F								
Converter Output Options										
No Outputs *(Standard)*			-							
No Outputs, DC Cable Only			0							
Two Digital Out			1							
4-20mA Analog only			2							
4-20mA Analog + Two Dig Out			3							
AMI Smart Output Only			4							
AMI Smart Output + Two Dig Out			5							
AMI Smart Output + 4-20mA Analog			6							
AMI Smart Output + 4-20mA Analog + Two Dig Out			7							
DC Power/ Analog Out Cable Options										
No DC Power or Outputs *(Standard)*				-						
No Cable - Output Configured (Quick Conn)				0						
6 ft (Open Leads - Strain Relief)				1						
25 ft (Open Leads)				2						
50 ft (Open Leads)				3						
Pulse Cable Length Options										
No Outputs (Standard)					-					
No Cable - Output Configured (Strain Relief or Quick Conn)					0					
6 ft (Open Leads)					1					
25 ft (Open Leads)					2					
50 ft (Open Leads)					3					
25 ft (7-Pin Male connector for Telemetry)					4					
50 ft (7-Pin Male connector for Telemetry)					5					
Output Cable Terminal Options										
Strain Relief *(Standard)*						1				
Quick Connect (25 & 50 ft Cable length only)						2				
Smart Output Protocol Options (*4 - 7 output option required)										
No AMI Outputs								-		
Sensus Protocol (6ft cable, Nicor Connector hardwired only)								SEN		
Itron 6 digit Protocol (6ft cable, Nicor Connector hardwired only)								IT6		
Itron 9 digit [100W] Protocol (6ft cable, Nicor Connector hardwired only)								IT9		
Neptune Protocol (6ft cable, Nicor Connector hardwired only)								NEP		
ATT Wireless Telemetry System (RTU, Solar Panel, 15 ft 7 pin Cable)								ATT		
Verizon Wireless Telemetry System (RTU, Solar Panel, 15 ft 7 pin Cable)								VZW		
Hazardous Area Location										
Class 1, Division 2, Groups A-D, T5										HL

PROCOMM CONVERTER PART NUMBER MATRIX

PC -	—	—	—	-	—	-	—
Converter Mounting Options							
Remote Mount	R						
Meter Mount	M						
Converter Power Options							
A/C Power		A					
DC Power		D					
Converter Output Options							
Dual 4-20mA Analog, Dual Digital *(Standard)*			1				
Modbus + STD (Two 4-20, two Dig)			2				
Hart + STD (Two 4-20, two Dig)			3				
Datalogger/BIV + STD (Two 4-20, two Dig)			4				
Datalogger/BIV + Modbus + STD (Two 4-20, two Dig)			5				
Datalogger/BIV + Hart + STD (Two 4-20, two Dig)			6				
AMI Smart Output + STD (Two 4-20, two Dig)			7*				
Datalogger/BIV + AMI Smart Output + STD (Two 4-20, two Dig)			8*				
Smart Output Protocol Options (*7 or 8 output option required)							
No AMI Outputs					-		
Sensus Protocol (6ft cable, Nicor Connector hardwired only)					SEN		
Itron 6 digit Protocol (6ft cable, Nicor Connector hardwired only)					IT6		
Itron 9 digit [100W] Protocol (6ft cable, Nicor Connector hardwired only)					IT9		
Neptune Protocol (6ft cable, Nicor Connector hardwired only)					NEP		
ATT Wireless Telemetry System (RTU, Solar Panel, 15 ft 7 pin Cable)					ATT		
Verizon Wireless Telemetry System (RTU, Solar Panel, 15 ft 7 pin Cable)					VZW		
Hazardous Area Location							
Class 1, Division 2, Groups A-D, T5							HL

PROCOMM CONVERTER SPECIFICATIONS

Physical Specifications

Electronic Housing	Diecast aluminum, powder coated enclosure w/ tamper resistant seal	
Converter Dimensions	Remote Mount: Height: 7.3" (18.5 cm) Width: 8.5" (21.6 cm) Depth: 4.3" (10.9 cm) Meter Mount: Height: 6.9" (17.5 cm) Width: 7.2" (18.25 cm) Depth: 6.2" (15.7 cm)	
Power	AC Power: 100-240 VAC / 45-66 Hz (10 W)	Note: AC or DC must be specified at time of ordering.
	DC Power: 12-48 VDC (10 W)	
Connection Options	• Compression gland seals for 0.24" to 0.47" diameter round cable • Conduit option: 1/2" NPT threaded connections	
Galvanic Isolation	All inputs / outputs are galvanically isolated from power supply up to 500 V	
Conductivity	Minimum conductivity of 5µS/cm	

Performance and Operational Specifications

Location	Indoor or outdoor use		
Operating and Storage Temperature	-4° to 140° F (-20° to 60° C)		
IP Rating	IP67 Die cast aluminum converter (only when connected using compression gland seals)		
Standard Outputs	Dual 4-20mA Outputs: Galvanically isolated and fully programmable for zero and full scale (0-21mA rangeability) Two separate digital programmable outputs: open collector transistor usable for pulse, frequency, or alarm settings.		
	• Volumetric Pulse • Flow Rate (Frequency) • Hardware Alarm • High/Low Flow Alarms • Empty Pipe • Directional Indication	• Range Indication • Maximum switching voltage: 40 VDC • Maximum switching current: 100mA	• Maximum switching frequency: 1250 Hz • Insulation from other secondary circuits: 500V
Optional Outputs	• Modbus • HART	• Smart Output™ (Sensus, Itron 6, Itron 9)	• Datalogger • Built-in verification

Display and Measurement

Keyboard and Display	Can be used to access and change set-up parameters using six membrane keys and an LCD display		
Engineering Units	• Cubic Meter • Cubic Centimeter • Milliliter • Liter • Cubic Decimeter • Decaliter • Hectoliter • Cubic Inches	• US Gallons • Imperial Gallons • Cubic Feet • Kilo Cubic Feet • Standard Barrel • Oil Barrel • US Kilogallon • Ten Thousands of Gallons	• Imperial Kilogallon • Acre Feet • Megagallon • Imperial Megagallon • Hundred Cubic Feet • Megaliters

PROCOMM CONVERTER SPECIFICATIONS (CONT.)

Other Specifications

Standard Model	• ISO 9001:2015 certified quality management system • CE • Certified by MET to UL 61010-1

HL Model	• ISO 9001:2015 certified quality management system
	• CE
	• Certified by MET to UL 61010-1 and MET C22.2 No. 61010-1-04
	  • Class I, Division 2, Groups A B C D, T5
	  • Class I, Zone 2 IIC T5

IMPORTANT
Refer to certification requirements. Do not substitute components.

IMPORTANT
The ProComm converter, models PC-RA1-HL series and PC-MA1-HL series have no user serviceable parts.

PROCOMM GO CONVERTER SPECIFICATIONS

Physical Specifications

Electronic Housing	Diecast aluminum, powder coated enclosure w/ tamper resistant seal, 6½" x 6½" x 43/8" tall
Converter Dimensions	See "Dimensions" section for meter mount and remote mount converter dimensions.
Power	**Battery:** Standard: three 3.6V lithium-thionyl chloride (Li-SOCI2) D size batteries with two AA backup batteries **AC Power:** 100-240VAC/45-66Hz (4W) **DC Power:** Linear power supply 10-35VDC (4 W)
Electrical Connections	• Optional shielded cable for 10-32VDC/4-20 mA output • Optional shielded cable for pulse out

Performance and Operational Specifications

Battery Life	Five-year expected battery life, five-year battery warranty
Location	Indoor or outdoor use
Altitude	Operating: 2000 meters Storage: 12,000 meters
Operating Temperature	-4° to 140° F (-20° to 60° C)
Storage Temperature	-4° to 140° F (-20° to 60° C)
Relative Humidity	0% to 100%
IP Rating	IP67 Die cast aluminum converter
Outputs	**Digital output:** Digital pulse (open collector) output for volumetric - Two isolated digital pulse (open collector) outputs for volumetric - AMI output **Analog output:** 4-20mA: Galvanically Isolated, 16 Bit resolution. All power configurations (including battery). Note: 9-30 VDC loop power required (not supplied via converter)

Display and Measurement

Display	• 2-Line LCD display (no backlight) • Non-volatile memory • Anti-reverse totalizer (standard) • Total (to 9 digits of precision)	• Flow rate and velocity (to 5 digits of precision) • Two alarms: low battery and empty pipe (optional) • Opening lid activates display
Digits	5 Rate, 9 Total	

Units

GPM	Gallons per minute	IGM	Imperial gal per minute	CFM	Cubic feet per minute
MGD	Mega gal per day	MI9	Miners inch (9G)	B5M	Barrels per minute (55G)
CFS	Cubic feet per second	MI1	Miners inch (11.22G)	B5H	Barrels per hour (55G)
MLD	Megaliters per day	APD	Acre feet per day	B5D	Barrels per day (55G)
LPS	Liters per second	KLH	Kiloliters per hour	B4M	Barrels per minute (42G)
CMH	Cubic meters per hour	LPH	Liters per hour	B4H	Barrels per hour (42G)
LPM	Liters per minute	CMM	Cubic meters per minute	B4D	Barrels per day (42G)
GPH	Gallons per hour	CFM	Cubic feet per minute		

Totalizer Units	GAL	Gallons	B42	Barrel (42G)	MH1	Miners Inch Hour (11.22G)
	CUF	Cubic Feet	B46	Barrel (46G)	MD1	Miners Inch Day (11.22G)
	AFT	Acre Feet	B55	Barrel (55G)	MH9	Miners Inch Hour (9G)
	CUM	Cubic Meters	IMG	Imperial Gallon	MD9	Miners Inch Day (9G)
	LIT	Liters	AIN	Acre Inch	KGL	Kilo Gallons
	MML	Megaliter	TON	Ton (Short)	MGL	Mega Gallons
	MTT	Metric Ton (KL)	MM1	Miners Inch Minute (11.22G)	IN3	Cubic Inch
	B31	Barrel (31G)	MM9	Miners Inch Minute (9G)		
Data Logger	Standard with all models, minimum of five years of data stored					

Other Specifications

Options and Accessories	• Data Logger - included as standard with five years of data storage at default (12hr) interval. (Cable sold separately) • AC, DC, and battery powered with battery backup powered available
Safety	• IEC 61010-1, Pollution Degree II • Overvoltage protection Category III

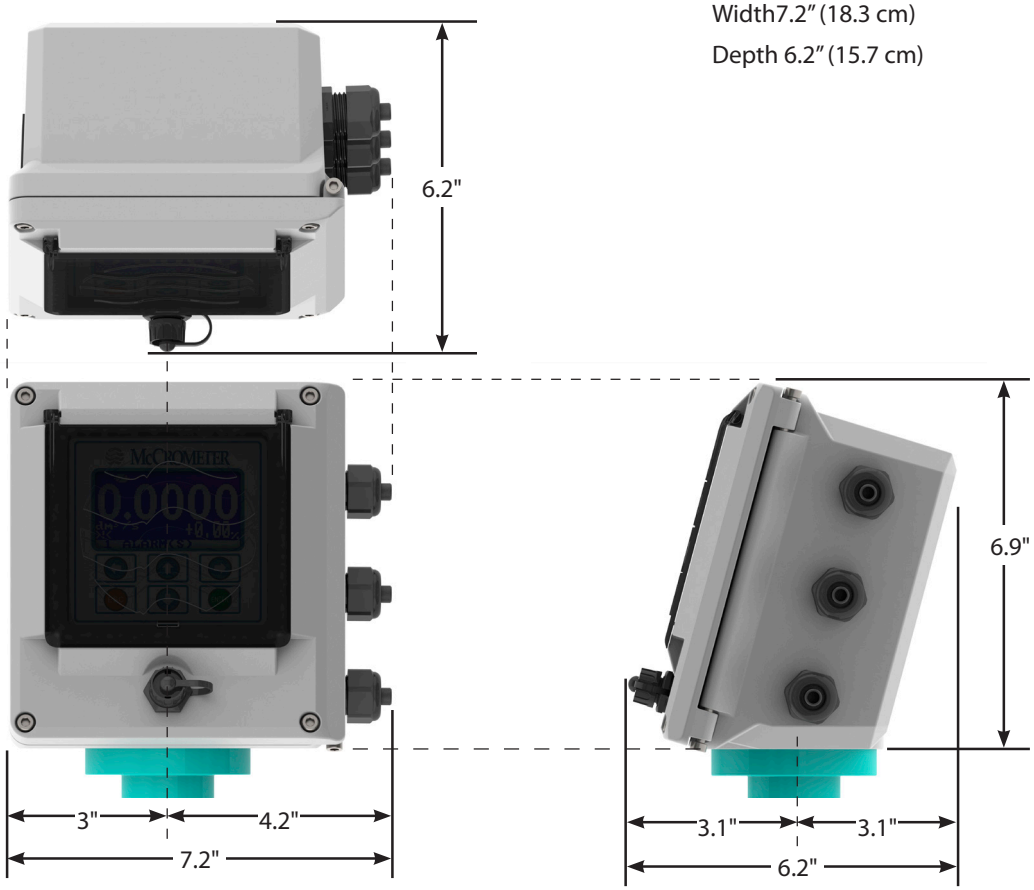
Certifications

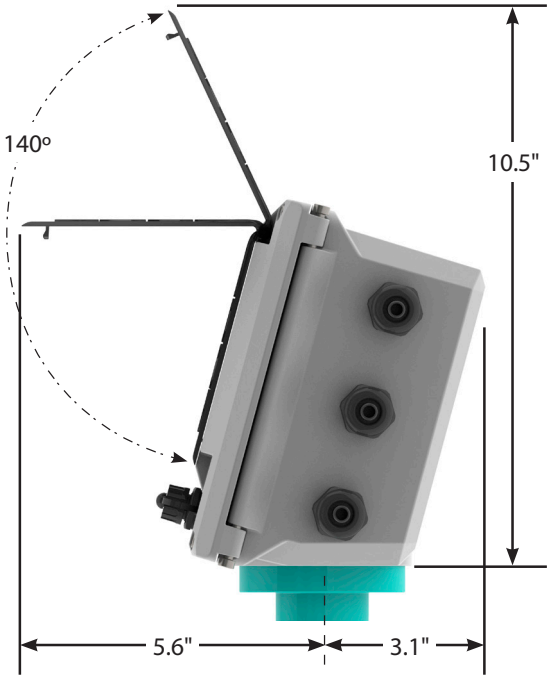
Standard Model	• ISO 9001:2015 certified quality management system • Certified by MET to UL 61010-1	

HL Model	• ISO 9001:2015 certified quality management system
	• Certified by MET to UL 61010-1 and MET C22.2 No. 61010-1-04
	  • Class I, Division 2, Groups A B C D, T5
	  • Class I, Zone 2 IIC T5	

PROCOMM CONVERTER METER MOUNT DIMENSIONS

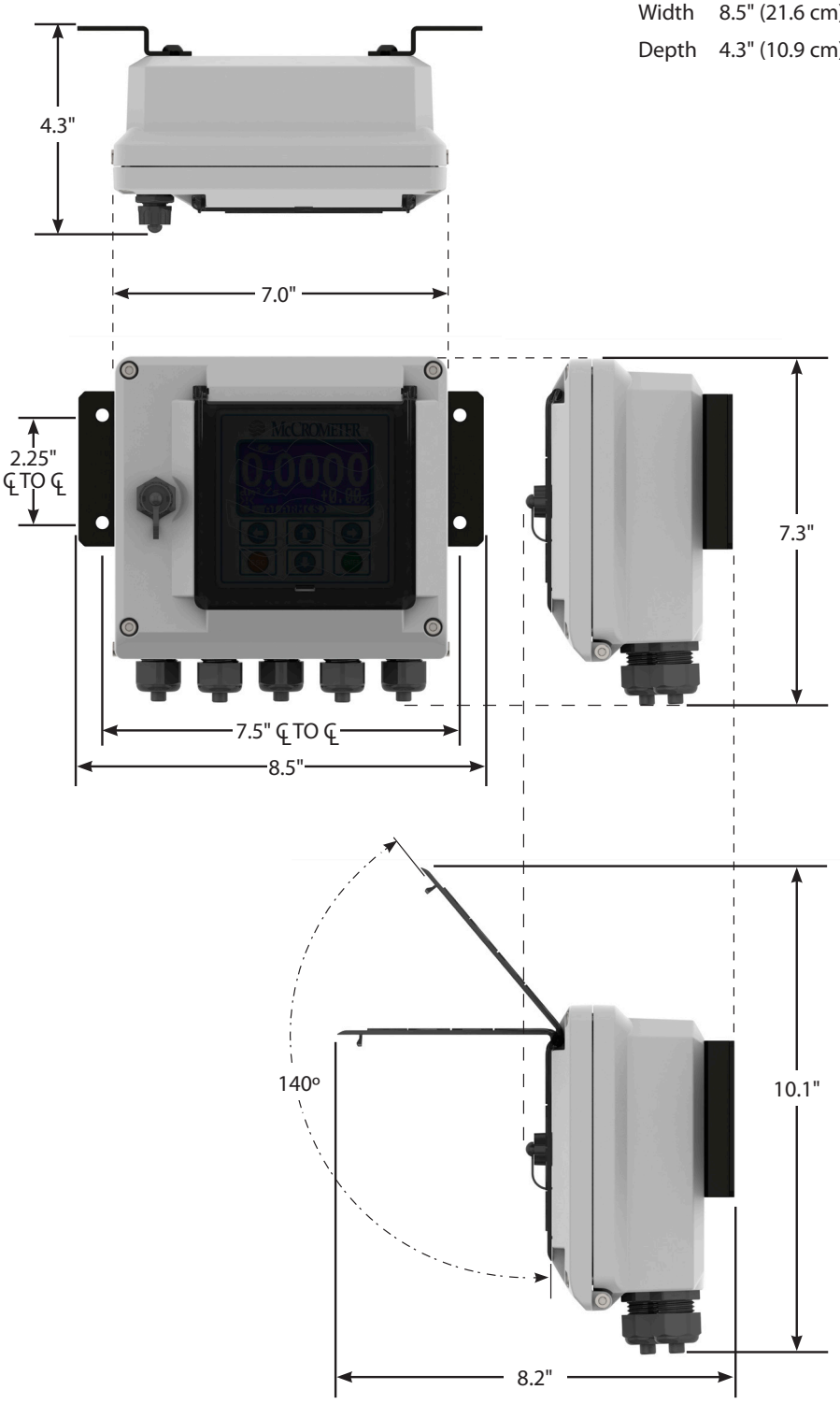
Height 6.9″ (20.1 cm)
Width7.2″ (18.3 cm)
Depth 6.2″ (15.7 cm)



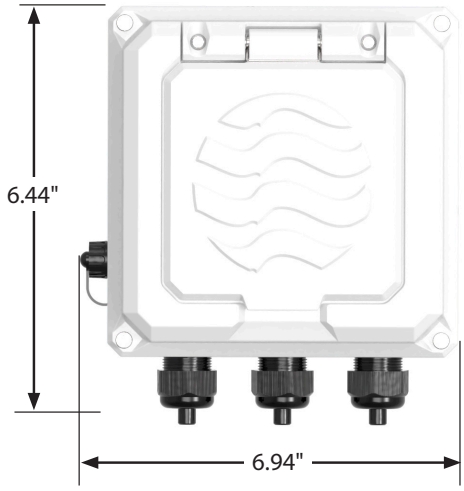


PROCOMM CONVERTER REMOTE MOUNT DIMENSIONS

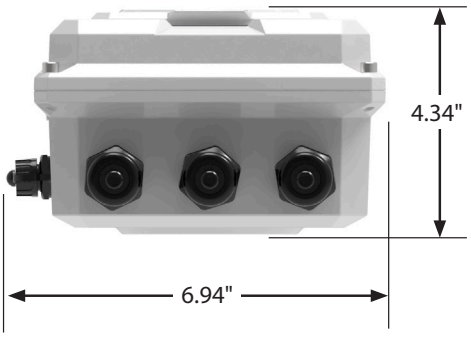
Height 7.3" (18.5 cm)
Width 8.5" (21.6 cm)
Depth 4.3" (10.9 cm)

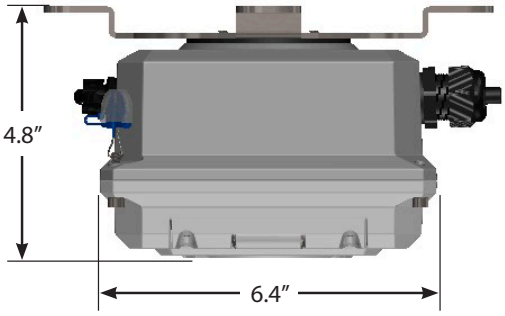


PROCOMM GO CONVERTER DIMENSIONS

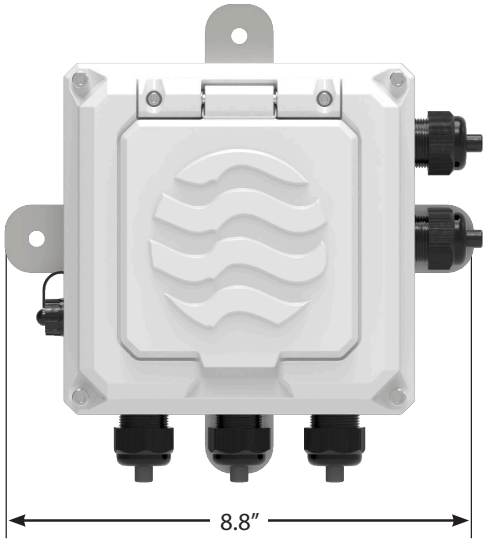


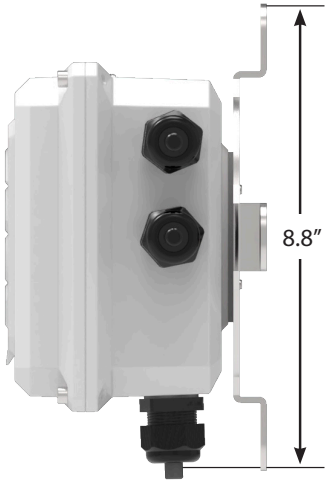
Meter mount converter





Remote mount converter





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